

MEMORANDUM DATE 1/3/87 TO: FILE FROM: Andrew Wallo III SUBJECT: E Limination of International Register SITE ALTERNATE NAME: International Register NAME: CITY: Ch. cayo & STATE: IL OWNER (S) Past: Twier nation & Register Current:
Owner contacted | yes | no; if yes, date contacted | TYPE_OF_OPERATION Research & Development ☐ Facility Type Production scale testing Manufacturing O Pilot Scale University O Bench Scale Process Research Organization Theoretical Studies ☐ Government Sponsored Facility ☐ Sample & Analysis □ Other B Experimental ☐ Production □ Disposal/Storage TYPE OF CONTRACT ☐ Prime Other information (i.e., cost □ Subcontractor + fixed fee, unit price, Purchase Order time & material, etc)_____ Contract/Purchase Order #_ CONTRACTING PERIOD: EArly 1240's (met Las Personnel used site Equipment) OWNERSHIP: AEC/MED AEC/MED ... GOVT GOVT CONTRACTOR CONTRACTOR OWNED OWNED LEASED LEASED ___OWNED__ LANDS BUILDINGS EQUIPMENT ORE OR RAW MATL FINAL PRODUCT WASTE & RESIDUE 🔯 MED/METARURGICAL LABORATORY PERSONNEL Used equipment at Elite for Centuless Grinding Experiments on a few pieces of urnainm vod.

GENTAED INVOLVENENT HIT PITE
Control AEC/MED managed operations(MET(AB) AEC/MED responsible for accountability (MET(AB) AEC/MED overviewed operations Contractor had total control unknown
MATERIALS_HANDLED:
Type (on basis of records reviewed)
No Radioactive Natural Radioactive from Feed Materials Production Ore
Quantities (on the basis of records reviewed)
None Production Quantities Small Amounts Comment Experiments were done on a f-cm Normal Uvanium Vods brought IN by MET LAB PERSONNEL OTHER PERTINENT FACTS:
☐ Facility was Licensed
During AEC/MED-Related Operations For Similar Activities For Other Activities Comment
 Commercial Production Involving Radioactive Material during AEC/MED Operations
D Facility was Decontaminated and Released
☐ Availability of Close Out Records
None
□ Radioactive Status: YES MAYBE PROBABLY NOT NOT
Contaminated Potential for Exposure (accessible)

<u>QU</u>	ANTITY OF	RECORDS_AVAILABLE:		.	
K	Very Litt	le 🗆	Same	□ Sufficient	
PR	DBABILITY_	OF FINDING ADDITION	IAL RECORDS:		
×	Low	☐ Possible	•	☐ High	
RE	COMMENDATI	<u>DNS:</u>			
	Eliminate Consider Collect M	for Remedial Action	1		
<i>ده</i> ۲0	mment It t Internet conds sugges FERENCES	onal Revister and in the Attachen work	few records 14 t was controlled was even done of	at very little uvanium I by METLAB. The Lack of I the site	was used
	- - - -				
SU	EARLY Rod. and	1940's to conduct ex	periments in E D Control of the My practices of The in excess	n was only used by MED, I read in a C(centraleis) we entransform Based on the MED History of Guidelines at Internal	na ariuwa

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INTERNATIONAL REGISTER Chicago ILL

DATE	FILE#	FROM	TO	SUBJECT	SITES	BOX #	
√.07/28/ ⁴	43 3.1CHO	CREUTZ, E.	COOPER, C.	SUMMARY ON THE USE OF CENTERLESS GRINDING EQUIPMENT ON URANIUM	SUMMERILL TUBING CO., WYCOFF DRAWN STEEL CO., ZEPHYR LAUNDRY MACHINE CO., INTERNATIONAL REGISTER CO.	MLRF	1969
04/23/4	43 3.1CHO	CHIPMAN, J.	DDAN, R.	LIST OF COMMERCIAL FIRLS DEALING WITH MET LABS	HOLVERINE, M.R. PRATT, JOSLYN, MIDWEST MANU. CO., SLOBE STEEL, ALCOA, B&T METALS, SUMMERILL, INTERNATIONAL REGISTER, WYCOFF, DOM	71	3763
V 07/28/	K 3.1040	CHEUTZ, E.	COPPER. C.	CENTERILESS SRINDLUG	SUMMERILL TUBING, MYCOFF DRAWN STEEL, ZEPHYR LADADAY MACHINE, INTERNATIONAL REGISTER, GLOBE STEEL TUBES	34X	<i>377</i> 5

Metallurgical Laboratory

pages and figures. P 3 of _____ copies, Ser._ DO V# 55/6/

Copy

C. M. Cooper

E. Creutz

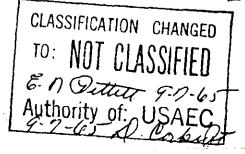
For your information, I am summarising our experience in the use of centerless grinding equipment on uranium. I also recommend the purchase of a Cincinnati centerless grinder for the Site B • cods

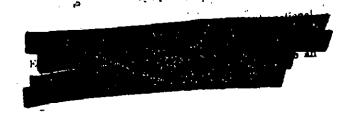
Our first experience with centerless grinding was obtained at the Summerill Tubing Company on January 4, 1945 when an extruded tube 2g feet long and 1 5/14" in diameter was ground with an accuracy of about .0035" over the entire surface. Although I did not see this actual operation, I understand that great pains were taken. I do not know how long the grinding took

On Jamery 25, two tubes and one red, each about 4 feet long, were taken to the Wycorf Drawn Steel Company where they were surfaced with an accuracy of about .001". About an hour was required to adjust the machine properly so that it would handle this material, and about an hour to clean up the surrages. The wheel used was somewhat too soft and had to be dressed frequently. Our impression after this test was that this method was a satisfactory one for obtaining good accuracy on wrenium but was rather slow and would be expensive because of wheel wear. Harder wheels tended to fill and for this reason did not seen to offer much advantage. It was realised that it would be very desirable to make tests with a number of different types of wheels to try to determine the most satisfactory. On February 26, a visit was made to the Zephyr Laundry Machine Company which had of work recently started manufacturing centerless grinders. The manager offered us the opportunity to make tests with different types of wheels at some time in the future.

On February 29, some 1" diameter pieces 6" long were ground at the International Register Company again with an accuracy of about .001". The same impression was gained here that time spent on determining the most suitable type of wheel would be well worthwhile. The machine design people suggested cylindrical grinding of these short pieces as a more practical method if they were out of round although a roughing out in a turret lathe and finishing in a centerless grinder also seemed practical.

On March 5, a 6 foot rod was straightened on an Abramson straightener and ground over its entire length with an accuracy of about .002" at Globe Steel Tubes. The wheel used here did not require





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C. M. Cooper



frequent dressing nor did it fill up. Although it was somewhat coarse, it seemed to give the best results of any we had tried. It was a carborundum wheel number 36ME. On May 18, some short pieces of rod 2 cm in diameter were ground at Globe preliminary to eladding with steel. On May 25, some 3 foot tubes were accurately ground at Globe to be clad with aluminum. For successful cladding, experience has shown that the tube should not taper or be out of round more than about .002".

On June 22, a 6 foot tube was ground and this longer length, requiring great care in handling, was successfully clad with aluminum.

In general, we have learned that centerless grinding can be very effective in producing high accuracy on short or long pieces of uranium providing the stock is not too far out of round, does not have excessive taper from end to end, and a wheel of the right composition is used. Also some time must be taken to set the machine properly. In cases where bad results have been obtained, one of these factors has apparently been at Fault.

When a large number of accurate pieces of the same size are required, a good method seems to be to take a rough out, for instance, on a turret lathe, and then finish on a conterless grinder. For short experimental rods and tubes of the sort finished recently for Abbott's experiments, the centerless grinder has been very useful. For accurate production of tubes or rods of lengths langer than a few feet, such as will probably be used in P-8 exponential and later piles, there seems to be no other available method than centerless grinding since a cylindrical grinder is not well suited for such work on pieces longer than about 3 feet. Therefore, to make use of the equipment for regular experimental parts, as well as to investigate thoroughly its applicability to long pieces and to special items such as thin walled tubing, I believe we should purchase a grinder that could be installed in the Site B shop.

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E. Creutz

EC/o

oc Chipman Smyth Reading File



April 28, 1943

TO: John Chipman

FROM: R. L. Doan

SUBJECT:

Experimental Nork at Outside Companies

This is with reference to your memorandum of April 23, 1943, giving a list of 11 companies at which various members of the Metallurgical group have been conducting experimental work from time to time involving tube alloy setal.

Major Peterson has outlined a definite procedure to be followed in all cases where it is desired to conduct experimental or other work at locations cutaide the confines of the Estallurgical Latoratory, in order that the security angle may be adequately taken care of, and has requested that the prior approval of his office be obtained before any work of this kind is actually unfertaken. The necessary forms for transmitting requests for approval of work to be done in outside plants are now available, and I have discussed them with you.

It is, of course, too late to obtain prior approval on such work as has already been done at the companies indicated in your list. However, as regards future work, I would like to request that one of the two following alternative be adopted by your group:

l. Suspend all sotivities at the companies listed in your memorandum until you can prepare the forms requested by the Area Engineer and secure his approval on each company.

2. If the anture of the work in hand at any of the companies indicated is too urgent to be held up pending obtaining the approval of the Area Engineer in the manner indicated above, it would be desirable to write a munorandum for Nr. Compton's signature to Major Peterson stating the special circumstances and requesting interim approal while the necessary request forms are being prosecuted.

CENSSILICATION DEPRISED Authority of: USAE

MUC # 10-17 This document consists of pages and figures. No. 6 of 7 copies, Ser. A April 28, 1945"

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enment cont information affecting the national waning of the or the revelution unauthorized person is prohibited by law.

The following is a list of comercial firms with whois Mr. Creuts and I have had dealings. Also I am listing the names of the personnel with whom we have had contacts and the type of work which has been done. The names of the personnel for whom electronce has been requested are marked with an asterisk. We would welcome further discussion as to the advisability of requesting clearence on the others.

Company	Personnel	Nork being done
Wolverine Tube Co. Detroit, Michigan	Otto Klopsch, Gen. Manager J. Redgers*, Chief Met. J. Schumar*, Asst. Met.	Cold drawing and ex- trusion of tuballoy and aluminum. Jacksting
Em. E. Pratt Co. Jolist, Illinois	Prank E. Clark, Pres. A. J. Blackert, Vice Pres.	Machining metal slugs
Joslyn Mfg. Co. Chiesgo and Fort Hayne	A. J. Blaeser*, Vice Pres. E. Y onkers*, Metallurgist L. Fry*, Gen. Mgr. Fort Mayn	Hot rolling and sold straightening of tuballoy
"Midwest Mfg. Co. "Galesburg, Illinois	S. S. Battles, Manager	Methods for Al jacketing
Globe Steel Tubes Milwaukse, Wisconsin	H. M. Ihrig, Dir. of Res. Hofman, Metallurgist	Cold drawing and cold straightening
Aluminum Co. of Amer. New Kensington, Pa.	F. G. Frary® B. J. Fletcher® John R. Willard®	Aluminum tubing, correction, and jacksting of tuballoy
B and T Metals Co. Columbus, Ohio	Mr. Bonnell* Marvin Smith*	Extrusion of tuballoy and of aluminum
Summerill Tubing Co. Bridgeport, Pa.	Jack Dods	Cold drawing of tuballoy Aluminum Shouthing
International Register Chicago	Mr. Bauerline Mr. Gellagher	Centoriess grinding of tuballoy
/ Wyooff Drawn Steel Co. Chicago	Mr. Johnson, Mgr. Pat Newburn, Shop Foreman	Cemterless grinding
Dow Chemical Co. Midland, Michigan	Vin. Loose, Metallurgist	Welding tuballoy

John Chipman

R. L. Donn

John Chipman